

**Listing of the Claims:**

1. (Currently Amended) A system for making computing applications throughout an enterprise aware of business events comprising:

a) an enterprise integration layer that supports integration of a plurality of front-office systems with a plurality of back-office systems and automatically publishes business events in accordance with interactions between the front-office systems and back-office systems comprising:

a1) an enterprise object model which defines objects that model data and services provided by the back-office systems;

a2[[1]]) a set of client access interfaces coupled to the front-office applications wherein the client access interfaces allow a plurality of different technologies to access the objects of the enterprise object model ~~transform data from the format of the front-office applications to a common data format;~~

a3[[2]]) a business object server coupled to the client access interfaces, wherein the business object server enables the interactions between the front-office systems and back-office systems by implementing data functions and service methods associated with the accessed objects by performing one or more of—performs object assembly, object—and disassembly, caching—and—synchronization, and service invocation functions, wherein service invocation includes determining which functions to invoke on one or more of the back-office systems; and

a4[[3]]) a set of adapters coupled to the business object server wherein



the adapters transform ~~business~~ the accessed objects created by the ~~business object server~~ into data requests compatible with a format of the back-office systems corresponding with the implementation of the data functions and the service methods associated with the accessed objects;

a4) ~~an enterprise object model to standardize business objects~~; and

b) a messaging system coupled to the enterprise integration layer that automatically subscribes to the business events published by the enterprise integration layer and for each business event, the messaging system automatically makes the computing applications that are interested in the business event aware of the business event[[s]].

2. (Currently Amended) The system of claim 1 wherein the enterprise integration layer further comprising a rules engine within the enterprise integration layer to that defines and stores rules regarding validation and data integrity, data and service access, event notification, and caching transforming the objects of the enterprise object model to the format of the back-office systems, rules regarding mapping each of the back-office systems to an appropriate adaptor in the set of adaptors, and rules regarding when to publish the business events in accordance with the interactions.

3. (Currently Amended) The system of claim 1 further comprising a business event repository within the enterprise integration layer to contain definitions of the



business events that are of interest to a plurality of the computing applications.

4. (Currently Amended) The system of claim 1 further comprising a back-office metadata repository within the enterprise integration layer to hold metadata supplied by the set of adapters to support the transformation of the objects of the enterprise object model to the format of the back-office systems.

5.-6. (Canceled)

7. (Currently Amended) The system of claim 1 wherein the set of client access interfaces comprise:

- an object interface;
- a relational interface; and
- a web services interface.

8.-10. (Canceled)



11 (Currently Amended). A system for making computing applications throughout an enterprise aware of business events comprising:

a) an enterprise integration layer that supports integration of a plurality of front-office systems with a plurality of back-office systems and automatically publishes business events in accordance with interactions between the front-office systems and back-office systems comprising:

a1) a rules engine that that defines and stores rules regarding criteria for when to publish the business events and rules regarding transforming data from a common format to a format of the back-office systems;

a2[[1]]) a set of client access interfaces coupled to the front-office applications wherein the client access interfaces allow a plurality of technologies to access data functions and service methods provided by the back-office systems and described in the common format-transform data from the format of the front office applications to a common data format;

a3[[2]]) a business object server coupled to the client access interfaces, wherein the business object server enables the interactions between the front-office systems and back-office systems by implementing the data functions and the service methods by performing one or more of performs object assembly, ~~object~~ and disassembly, ~~caching and synchronization,~~ and service invocation functions, wherein service invocation includes determining which functions to invoke on one or more of the back-office systems; and



- a4[[3]]) a set of adapters coupled to the business object server wherein the adapters transform the data functions and the service methods described in the common format ~~business objects created by the business object server into data requests compatible with a~~ format of the back-office systems corresponding with the implementation of the data functions and the service methods; and
- a4) ~~a rules engine to define and store rules regarding validation and data integrity, data and service access, event notification, and caching; and~~
- b) a messaging system coupled to the enterprise integration layer that automatically subscribes to the business events published by the enterprise integration layer and for each business event, the messaging system automatically makes the computing applications that are interested in the business event aware of the business event[[s]].

12. (Currently Amended) The system of claim 11 further comprising an enterprise object model within the enterprise integration layer ~~to standardize business objects,~~ which defines objects that model the data functions and the service methods provided by the back-office systems, wherein the common format is a format of the objects in the enterprise object model.

13. (Currently Amended) The system of claim 11 further comprising a business event repository within the enterprise integration layer to contain definitions of the business events that are of interest to a plurality of the computing applications.



14. (Currently Amended) The system of claim 11 further comprising a back-office metadata repository within the enterprise integration layer to hold metadata supplied by the set of adapters to support the transformation of the data functions and the service methods described in the common format to the format of the back-office systems.
15. (Original) The system of claim 11 further comprising a transaction processor within the enterprise integration layer to provide distributed transactional quality of service.
16. (Original) The system of claim 11 further comprising a local data store within the enterprise integration layer to make data persistent within the enterprise integration layer.
17. (Currently Amended) The system of claim 11 wherein the set of client access interfaces comprise:
- an object interface;
  - a relational interface; and
  - a web services interface.



18. (Original) The system of claim 11 wherein the enterprise integration layer uses previously existing infrastructure services within the enterprise.

19. (Original) The system of claim 18 wherein the previously existing infrastructure services are selected from a group of services comprising:

- a naming and directory service;
- a security service; and
- an application management and monitoring system.

20. (Original) The system of claim 19 wherein the previously existing infrastructure services include each of a group of services comprising:

- a naming and directory service;
- a security service; and
- an application management and monitoring system.



21. (Currently Amended) A system for making computing applications throughout an enterprise aware of business events comprising:

a) an enterprise integration layer that supports integration of a plurality of front-office systems with a plurality of back-office systems and automatically publishes business events in accordance with interactions between the front-office systems and back-office systems comprising:

a1) a business event repository that contains definitions of the business events that are of interest to a plurality of the computing applications and also identifies all of the publishers for each of the business events;

a2[[1]]) a set of client access interfaces coupled to the front-office applications wherein the client access interfaces allow a plurality of technologies to access data functions and service methods provided by the back-office systems and described in a common format~~transform data from the format of the front-office applications to a common data format;~~

a3[[2]]) a business object server coupled to the client access interfaces, wherein the business object server enables the interactions between the front-office systems and back-office systems by implementing the data functions and the service methods by performing one or more of performs object assembly, object~~and~~ disassembly, caching~~and~~ synchronization~~and~~ service invocation functions, wherein service invocation includes determining which functions to invoke on one or more of the back-office systems; and



a4~~[[3]]~~) a set of adapters coupled to the business object server wherein the adapters transform the data functions and the service methods described in the common format ~~business objects created by the business object server~~ into ~~data requests compatible with a~~ format of the back-office systems corresponding with the implementation of the data functions and the service methods; and

a4) ~~a business event repository to contain definitions of business events;~~  
and

b) a messaging system coupled to the enterprise integration layer that automatically subscribes to the business events published by the enterprise integration layer and for each business event, the messaging system automatically makes the computing applications that are interested in the business event aware of the business event~~[[s]]~~.

22. (Currently Amended) The system of claim 21 further comprising an enterprise object model within the enterprise integration layer ~~to standardize business objects,~~ which defines objects that model the data functions and the service methods provided by the back-office systems, wherein the common format is a format of the objects in the enterprise object model.

23. (Currently Amended) The system of claim 21 further comprising a rules engine within the enterprise integration layer ~~to~~ that defines and stores rules regarding



~~validation and data integrity, data and service access, event notification, and~~  
~~caching transforming data from the common format to the format of the back-office~~  
~~systems.~~

24. (Currently Amended) The system of claim 21 further comprising a back-office metadata repository within the enterprise integration layer to hold metadata supplied by the set of adapters to support the transformation of the data functions and the service methods described in the common format to the format of the back-office systems.

25. (Original) The system of claim 21 further comprising a transaction processor within the enterprise integration layer to provide distributed transactional quality of service.

26. (Original) The system of claim 21 further comprising a local data store within the enterprise integration layer to make data persistent within the enterprise integration layer.



27. (Currently Amended) The system of claim 21 wherein the set of client access interfaces comprise:

- an object interface;
- a relational interface; and
- a web services interface.

28. (Original) The system of claim 21 wherein the enterprise integration layer uses previously existing infrastructure services within the enterprise.

29. (Original) The system of claim 28 wherein the previously existing infrastructure services are selected from a group of services comprising:

- a naming and directory service;
- a security service; and
- an application management and monitoring system.

30. (Original) The system of claim 29 wherein the previously existing infrastructure services include each of a group of services comprising:

- a naming and directory service;
- a security service; and
- an application management and monitoring system.



31. (Currently Amended) A method for a source computing application within an enterprise making a target computing application within the enterprise aware of a business event comprising:

identifying business events within the enterprise, wherein business events are key milestones within a process flow;

creating a common format for the business events;

~~storing the business events in a repository;~~

~~modifying the source application to signaling that [[a]] one of the business events~~ has occurred with the source application;

transforming data related to the one of the business events from a format of the source application to the common format;

publishing the one of the business events and the data related to the one of the business events in the common format with the source application;

~~an adapter coupled to the source application publishing the business event in the common format;~~

~~the adapter coupled to the source application transforming data related to the business event from its native format to a standard format;~~

~~the adapter coupled to the source application publishing the data in the standard format;~~

subscribing to the one of the business events with the target application;

transforming the data related to the one of the business events from the common format to a format of the target application;

processing the one of the business events with the target application.



~~an adapter coupled to the target application subscribing to the business event; and~~  
~~the adapter coupled to the target application transforming the data from the standard format to its native format.~~

32. (Currently Amended) The method of claim 31 wherein the one of the business events and the data related to the one of the business events are combined in a single packet and published.

33. (Currently Amended) The method of claim 31 wherein the one of the business events and the data related to the one of the business events are independently published to a message bus.

34. (Currently Amended) The method of claim 31 wherein the business event and the data related to the business event are published to a message queue or a message bus.

35. (Canceled)

36. (New) The method of claim 31 further comprising:  
 identifying which of the business events to publish, wherein the one of the business events is identified to publish.



37. (New) The system of claim 1 wherein object assembly includes creating a composite object by aggregating data from a plurality of back-office systems, object disassembly includes breaking a composite object into multiple objects for storage in at least one of the back-office systems.

38. (New) The system of claim 1 wherein a business event may occur upon the implementation of the data functions and the service methods including creating data, reading data, updating data, deleting data, and invoking one of the service methods.

39. (New) The system of claim 3 wherein the business event repository further includes an identification of all of the publishers for each of the business events.

40. (New) The system of claim 1 wherein the messaging system comprises a transformation layer including one or more adaptors that map data corresponding to business events between a format of the enterprise object model and a format of the computing applications.

41. (New) The system of claim 40 wherein the one or more adaptors include a source application adaptor that transforms data related to a business event from a format of a source of the business event to the format of the enterprise object model and a target application adaptor that transforms data from the format of the enterprise object model to a format of a target subscribed to the business event.